

III. REMARKS

1. Claims 1-20 and 22-30 remain in the application. Claim 21 has been cancelled. Claims 1, 2, 13, 14, 22, 27, and 30 have been amended.

2. Claims 1 and 14 have been amended to overcome rejections for indefiniteness under 35 U.S.C. 112, second paragraph.

3. Claim 22 depends from claim 13. Antecedent basis for the term "encrypted version of said PIN" is provided by claim 13.

4. Applicants respectfully submit that claims 27-30 are not anticipated by Challenger et al. (US 6,668,323, "Challenger").

Challenger fails to disclose or suggest a message sent to a data center that includes authorization data indicative of the device and an authorized user of said device, and fails to disclose or suggest informing the authorized user of a remaining number of reset operations, all as recited by claim 27 as amended.

Applicants find no disclosure of a message that includes both authorization data indicative of the device and an authorized user of the device in Challenger. There is no disclosure in Challenger related to informing an authorized user of the remaining number reset operations allowed.

At least for these reasons, Applicants submit that Challenger fails to anticipate independent claim 27 and dependent claims 28-30.

5. Applicants respectfully submit that claims 1-12 are patentable over the combination of Kuhn, *Probability Theory For Pickpockets-ec-PIN Guessing*, August 30, 1997, ("Kuhn") in view of Matyas et al. (US 4,924,514 "Matyas").

The combination of Kuhn and Matyas fails to disclose or suggest generating a number of random binary bits, determining the least significant bits of the number of bits, and converting the least significant bits to a decimal integer, as recited by claim 1.

Applicants note that Kuhn does not teach PIN creation. Rather Kuhn's whole premise is related to the theoretical mechanics to "hack" an already existing PIN. Kuhn supposes he can discover a PIN value using probability theory to guess the PIN value - and his supposition is only "theoretically possible" if a 56-bit (single DES) encryption key was used in the creation of the PIN. Further, Kuhn bases his assumptions on knowing some basic starting numbers such as bank routing number and account number within certain boundaries.

5.1 Applicants find no disclosure in the combination of Kuhn and Matyas related to generating a number of random binary bits. The Office Action refers to page 1, lines 12-17 and the figure of Kuhn as disclosing this feature. This section of Kuhn describes concatenating five digits of a bank routing number, a ten digit account number, and a single digit card sequence number. The result is transformed into a 64 bit pattern by encoding each digit with its 4 bit BCD equivalent.

This process doesn't appear to be even remotely related to generating a number of random binary bits. The American Heritage Dictionary, New College Edition, Houghton Mifflin, provides various definitions for the word random, including: "Of or designating a phenomenon that does not produce the same outcome or consequences every time it occurs under identical circumstances;" and, "Of or designating a sample drawn from a population so that each member of the population has an equal chance to be drawn." In contrast, Kuhn describes concatenating

a known set of numbers and coding each digit of the concatenation with its 4 bit BCD value. There is nothing in Kuhn's process related to a phenomenon that does not produce the same outcome or consequences every time it occurs under identical circumstances. Furthermore, there is nothing in Kuhn that provides a sample drawn from a population so that each member of the population has an equal chance to be drawn. Thus, Kuhn does not describe generating a number of random binary bits.

5.2 There is nothing in the combination of Kuhn and Matyas related to determining the least significant bits of the number of bits. The Office Action refers to page 1, line 17, page 4, and the figure of Kuhn as disclosing this feature. Kuhn describes taking digits 3-6 of a 16 digit hexadecimal number and replacing all occurrences of the letters A-F by digits 0-5, respectively. However, examining 4 specific digits, of a hexadecimal number is different from determining the least significant bits of a number of bits at least because the specified digits do not necessarily include all of those in a least significant position. More importantly, the hexadecimal number by definition is not in a binary format and so determining the least significant bits of a number of bits is not disclosed.

5.3 The combination of cited art does not disclose or suggest converting the least significant bits to a decimal integer. As already mentioned, the cited portion of Kuhn describes taking digits 3-6 of a 16 digit hexadecimal number and replacing all occurrences of the letters A-F by digits 0-5, respectively. This replacement operation utilizes a 16 digit hexadecimal number which is clearly different from a number of random binary

bits. Kuhn's replacement procedure operates on digits 3-6 which are not necessarily the least significant bits of the number of bits. Furthermore, there is no conversion of least significant bits to a decimal integer in Kuhn. That is, there is no conversion from binary to decimal form. Kuhn describes replacing hexadecimal letters with numbers that are not the values represented by the hexadecimal letters. Still further, there is no conversion of bits, only replacement of hexadecimal digits which is clearly different.

5.4 Applicants further submit that generating a number of random binary bits, determining the least significant bits of the number of bits, and converting the least significant bits to a decimal integer are not inherent in the cited references. A rejection based on inherency must include a rationale or evidence tending to show inherency.

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency. ... To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference.... (MPEP 2112 quoting *In re Rijckaert*, 9 F.3d 1531, 1534, (Fed. Cir. 1993), and *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App.&Inter. 1990), emphasis in originals).

Applicants respectfully submit that because generating a number of random binary bits, determining the least significant bits of the number of bits, and converting the least significant bits to a decimal integer are not necessarily part of the cited references, that these features are not inherent in the cited references.

At least for these reasons, Applicants respectfully submit that independent claim 1 and dependent claims 2-12 are patentable over the combination of Kuhn and Matyas.

6. Applicants respectfully submit that claims 13-19, 25, and 26 are patentable over the combination of Holch et al. (US 6,280,328, "Holch") in view of Matyas.

The combination of Holch and Matyas fails to disclose or suggest generating a number of random binary bits, determining the least significant bits of the number of bits, and converting the least significant bits to a decimal integer, as recited by claim 13. Applicants fail to find these features in the cited combination.

At least for these reasons, the combination of Holch and Matyas fails to render independent claim 13 and dependent claims 14-19, 25, and 26 unpatentable.

7. Applicants respectfully submit that claims 20 and 22-24 are patentable over the combination of Holch and Matyas in view of Kuhn.

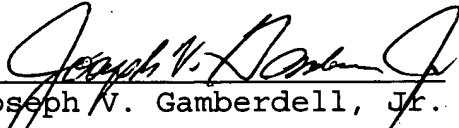
Claims 20 and 22-24 depend from claim 13. Claim 13 includes features found in claim 1, specifically, generating a number of random binary bits, determining the least significant bits of the number of bits, and converting the least significant bits to a decimal integer. For all the reasons stated above, the combination of Holch, Matyas, and Kuhn fails to disclose or suggest all the features of claim 13 and thus fails to render claim 13 and claims 20 and 22-24 unpatentable.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and

are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


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